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CONTENTS

A Case of the Pathetic Fallacy: D. W. PRALL 113

Logic as Language Habits versus Logic as Formal Truth: MARIE SWABEY 119

Book Reviews:

Laird's Hume's Philosyphy of Human Nature: STERLING P. LAMPRECHT. 128

Roguin's Sociologie: MOSES J. ARONSON 136

Young's A Philosophy of Reality: RUDOLF KAGEY 137

Wolfenden's The Approach to Philosophy: RUDOLF KAGEY 138

Reid's The Rôle of Logical Form in Propositions about Existence: RUDOLF KAGEY 138

Journals and New Books 139

Notes and News 140

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THE JOURNAL OF PHILOSOPHY

A CASE OF THE PATHETIC FALLACY

MRS. Swabey's article on logical force in demonstration [1] leaves a reader with at least two baffling questions. If "logical force" is somehow something more than the unhappy "nominalists" have shown it to be—quite conclusively, as they suppose—is it not a somewhat serious flaw in a critical objection to their view merely to insist once more upon this familiar opinion, as if it were not exactly what their work has actually exhibited as a mistake, what their arguments have been consciously and conscientiously directed against? And, secondly, what of their actual analyses, than which it would be difficult to find anything in current philosophy more meticulous, more ingenious, more elaborate, or more clearly demonstrative? This baffling article speaks as if such analysis had destroyed something precious, namely, the logical force and the deductive concatenation of demonstration. But analysis is in this respect powerless, as every one knows, the writer of the article included.

If after the analysis is completed any one still wishes to call the formal results demonstrations without logical force, such a critic would seem to be under some slight obligation to exhibit their logical failure. And if he admits their logical success, whether this is "force" or not, then the validity here found would seem to be quite accurately described in Mrs. Swabey's own opening paragraphs, and the rest of what she says would be merely an objection to the description. But the description can hardly be dismissed as absurd. The terms in which it is given are not accidental; they have been carefully and painfully chosen as most scrupulously indicative of the actualities involved. And they have been chosen not in enthusiastic haste, but in mature reflection by men who have spent years of attention not only upon the exploitation of logical method in detailed systematic construction, but also upon the general questions of the validity and the character of the systems constructed. If in the opinion of some one else a better name for the character of these systems would be "logical force," then it is the logical force of demonstration that the description applies to, and there is no quarrel except over this one added descriptive term. But to the term itself

[1] This JOURNAL, Vol. XXIX, No. 16, pp. 431–439.

no logician would object, I think, unless it is used to mean more than the most rigorous examination of logical systems ever undertaken or carried through has been able to find in them, and is then insisted upon as essential but never explicitly made out.

To put my difficulty a little more briefly, these "nominalists" are said to miss the vitality of genuine logical conceptions which Mrs. Swabey tells us are "cogitations of the psychophysical organism." Cogitations are neither "frozen" nor "abstract"; from them the breath of life has not departed. Of course not; but it is the abstract principles upon which such processes of valid thinking proceed and the structural systems developed by this procedure that alone constitute what can be put down in discourse as logic, whether as rules for operation or as descriptive forms.

That this whole process is circular in the only sense in which these dangerous "nominalists" call it circular is not their discovery. It is the ancient and familiar doctrine that first principles can not be demonstrated, and hence that if it is the business of philosophy to establish first principles, it is the business of philosophy to examine these in the light of experience instead of pretending to prove them by finding what Mrs. Swabey calls "anterior stages" from which one "advances" to them. Logic serves deductively to lay out what follows from the first principles. And again, whether these consequences or the principles themselves are applicable or not to the world is a matter for empirical verification.

But what follows from any principles is only what is really asserted when we assert them. In assertion the principles themselves are the discursive vehicle; but it is only what this vehicle actually carries that arrives at the end of the deductive journey. Nothing follows from any principles that is not explicitly in them, either in their general form or in the more determinate meanings of them as defined with reference to a given subject-matter. And if it is objected that this is confusing *explicit* with *implicit*, and so missing the whole point of deduction, we have only to remind ourselves that on any definition of implication if A implies B we can not have A without having B, so that the assertion of A, if A really does imply B, no matter whether A is one statement or many, has already given us what we assert when we assert B, though commonly in such a complex structure that we have not distinguished B's determinate form. The interesting fact about actual inference is not the logical basis of deduction in implication, but the natural possibilities of our world and of language in indicating aspects of that world, of the sort that allow us to formulate implicative relations in assertions that are apparently worthy of belief. If color implies extension or effects imply causes, the basis for such statements is either definition itself

or else belief in the genuineness or even the universality of the apprehended content to which our linguistic or other symbolic terms are taken to be unambiguously applicable. But modern logicians have paid very special attention to the nature of symbolism; and they are certainly not under the delusion that principles assert themselves. Their elaborate discussions of the so-called sign of assertion more than amply show this.

Nor in considering abstract structures in analysis are they supposing that such structures exist concretely. They do not at all deny that they abstract from the concrete thinking of men what is concretely found only as present to or in such thinking. Thus these logicians do not fall into Mrs. Swabey's confusion—fairly anomalous in the present state of logical theory—of supposing that their abstract forms are not abstractions, or that logical form could be anything *but* abstract. It is even dead, if you like, though why what is dead should be either uninteresting or unimportant or non-logical is not easy to see.

Thus it is not derogatory to say of a view of the nature of formal logic that it takes no account of dynamic processes. That form is not process is not a heresy invented by symbolists or nominalists. It was made out thoroughly enough by Aristotle in various contexts, and Plato had been only too clear on the point. But as some earlier philosophers had either denied process or else denied form, the adequacy of Aristotle consisted in part of affirming the distinction between them as categorical. The whole of the *Physics* might plausibly be cited as merely one extended exposition of this distinction. What Mrs. Swabey apparently wants is to exclude active thinking process, which is temporal, from what she calls the logical "advance from anterior to subsequent stages"; for she says that whether or not the apprehension of the course of this advance requires the experience of temporal succession is logically irrelevant. But at the same time she demands the breath of life in it. Now the breath of life is temporal and dynamic. If we are to be said to keep it in logic, then it can not be said that the experience of temporal succession is logically irrelevant. The vital nature of logic, if its nature *is* essentially vital, can not be irrelevant to an account of that nature.

But breathing, like other dynamic operations, can not be described without a time-variable, nor can it be felt as vital character without being apprehended as temporal. What vitality, what life is breathed into the explicitly described nature of logic which is not its *apprehended* nature? And if we do not in any case apprehend this vital breath, what possible sense does it make to say that in an adequate account of the systematic nature of logic, terms such as vitality and the breath of life are properly applicable and even es-

sential to the adequacy of one's views, which may thus come to include that elusive element of force that Mrs. Swabey cherishes?

Of course the answer here is familiar. There is living logical process that is non-temporal and *sui generis;* there are conceptions that are themselves active forces; reason itself is a functioning, and hence the structure of reasoning is not static. Abstraction kills, analysis destroys, and rigorously formal symbolic logic is falsification of rational discourse, a mere mechanical fetish instead of living thought. But these are the statements that the symbolists have explicitly coped with and criticized for a generation. No symbolist need suppose, and I take it that no intelligent symbolist does suppose, that logical structures are concrete existential entities, or full descriptions of even the most narrowly rational activities of living minds. When he says that discursive concatenated logical demonstration is only necessary because of our psychological limitations (Mr. Eaton is quoted to this effect) he does not rule out genuine deductions; he only notices what it actually is in cases where we all find it. But, among many other elder thinkers, it was such philosophers as Descartes and Locke that noticed this, not the perverse moderns. Locke's account of intuitive and demonstrative knowledge and Descartes's fourth rule in the *Discourse* are sufficient evidence of the view. Citing fifty other passages or fifty other authors would make it no surer, since such characteristic passages are examples both of the best known thought of the seventeenth century and of the most familiar ideas ever since.

When Mrs. Swabey speaks as if Mr. Eaton had substituted "some kind of preëstablished harmony" for genuine deduction, she is again completely baffling, if she intends this as adverse criticism of a view of logic. In the first place the harmony is not *pre*-established at all; it is exhibited explicitly in the defined and defining rules among the postulates as the actual deductive connections present in the system. If when these are apprehended they look to Mrs. Swabey like a preëstablished harmony, then one can only say that that is exactly the character that actual exhibited deductive systems appear to Mrs. Swabey herself to have. That formal logic is analytical in its procedure is of course obvious. But what analysis does is simply to show that so-called later properties and relations were either not rigorously deduced by inference based on implication, but found or invented and added, or else that they were "wittingly or unwittingly introduced" in the original postulates. If they were not there introduced, then logically valid inference can by definition never deduce them; since demonstration is demonstrably tautological. Mrs. Swabey's geometrical example falls perfectly clearly under this account, and if she refuses to believe in the tautological character of

demonstration, surely we may expect her to show the flaws in Wittgenstein's proof, instead of insisting or denying this demonstrated tautological nature because to admit it makes logic seem dead and formal to her.

Mr. Veblen, for example, has, as is surely quite generally known, given alternative sets of postulates from which demonstrably a whole geometry can be and has been strictly—and tautologically—"deduced." "Wittingly or unwittingly," like the other inventors of postulate sets, he has actually laid bare and then established by analysis the harmony of various systems. To say that it is hard to see in what the connection of their parts consists looks very much like refusing to apprehend the primitive notions and the rules of operation which the far from meaningless symbols indicate.

As to the supposed inadequacy of the machine analogy, what does Mrs. Swabey mean to say here? Is the number system not a logical structure? Or are the results of the calculating machines not really numerical results? Are we to deny that what they produce is the unambiguous indication of the same logically valid structure as that which a mind operating upon the same data and following the same principles exhibits as the logical results of its logical operations? A machine does indeed work by means of wires, wheels, and levers; but does not a psycho-physical organism at least apparently make use of nerves, cells, and muscles? And of what possible use would machines of this sort be to rational creatures if they did not operate according to the principles of logical structure? That a machine operates causally is parallel to the fact that a psycho-physical organism operates organically. But why the structure of the results, or the nature of the principles of calculation in either case, should be confused with the materials of the functioning structure or the mechanical or organic operations involved, is quite unaccountable. The fallacy here is just the reverse of that which Mrs. Swabey attributes to realists as a "device," which however does not, as she asserts it does, involve separation any more than distinguishing color from shape involves separation. To fail to make the distinction, whether with respect to machines or to human organisms, is to fail to distinguish logical structure at all and so to leave it embedded in the existential matrix where it can plausibly be spoken of as alive and breathing.

Why Mrs. Swabey should suppose that Mr. Lewis's now famous dictionary illustration of his peculiar view of ultimate circularity in definition is taken by him or by any one else to be in all other respects an analogue of deductive systems is a mystery. And to say that Mr. Lewis has apparently never thought of the possibility that internal self-consistency might constitute a common criterion of all supposedly

alternative logics is frivolous. For the assertion is made in the face of the fact that this is the obvious assumption on the basis of which Mr. Lewis characterizes a system as logical, so that alternative logics may even conceivably constitute a genuine variety of self-consistent systems. What seems not to have occurred to Mr. Lewis's critic is that logicians all admit what she says might furnish the outline of the one non-alternative logical system, which is what she no doubt calls logic itself with its breathing and vital force. But more sceptical and apparently more industrious logicians have also made some attempt to see exactly what consistency may be taken to mean—as in recent articles by Mr. Weiss,[2] Mr. Nelson,[3] and many others. They have discovered that the classical logicians were right in noticing its purely negative function in ruling out the inconsistent, its powerlessness to bring about any systematic accretions, and the usefulness on the other hand of more powerful postulates and quite other primitive ideas than the elementary or perhaps merely vague sense of the term "consistency" that Mrs. Swabey seems to intend.

One may with Mr. Sheffer call the common properties of alternative logics "foundational logic." One may with Mr. Lewis, if I follow him, take this proposed "outline of a basic non-alternative logic" to be the very simple fact that we agree to assert what we assert and not to deny it. Mr. Schiller keeps telling us that this basic logic amounts to nothing but the personal moral injunction to agree to mean what we say, which involves some attempt to say exactly what we mean. But the filled-in outline would be only a dead system, rigorous in being tautological. The breath of life in it could only be the assertion of it, or the logically irrelevant expression of belief in it, along with the further belief, in Mrs. Swabey's case, in a special, unrevealed and unanalysed "logical force" inhering somehow in the "principle of inference" and carrying with it "a certain inevitableness and impulsion." But there is nothing more inevitable than an exhibited tautology. As for impulsion, that is "force" in quite another sense—moral, practical, or merely natural.

As for the "brief concluding remarks" of the criticism we may rejoin that with totalities it has been shown that in characteristic cases we can not deal at all without denying our own assertions, running into contradictions. With classes it is the despised "nominalists" who alone have dealt at all adequately. If "nominalists" do really abhor universals, at least they will hardly be accused of having failed to consider them pretty fully; and of the men whom Mrs. Swabey seems to designate nominalists, none of them, so far as I know, claims this label. Nor is there any reason on earth why a

[2] *The Monist*, October, 1928.

[3] *Mind*, October, 1930.

serious thinker should eschew all discussion of what he happens to abhor. What nominalists have doubted is the sort of universal that is entirely unnecessary to logical demonstration, the kind that may be —for all one can tell by what she says—Mrs. Swabey's kind of universal. And in the attack upon such universals what has been impugned is that very genuineness that Mrs. Swabey assumes and speaks of as if it had never been a matter of controversy. Logical systems "taken as genuine" appear to be for her not the ones we know, nor those that have been so elaborately analysed, but only such unanalysed systems as are entirely comprised in her notion of consistency itself, a non-impulsive "force," if ever there was one.

That the postulates of a system are not entirely free is in one sense clear enough; we are only limited natural creatures with limited imaginations and limited interests. But if in the face of the multitude of alternative sets that have been invented any one is sure that men are not free to go on indefinitely inventing new ones, the ground of his assurance might well be given; it would be valuable.

I hope that I have justified my feeling that Mrs. Swabey's article is really baffling in the questions it raises. The logicians certainly do not need an amateur to defend them, and perhaps an answer to this criticism of their views is gratuitous. But it would seem to me too bad to let it pass, for fear it might encourage us lay readers in the continued neglect of a point of view which is hardly to be appreciated without some attention to the work of symbolic logicians and the light that this throws upon the nature of logic. "Force" is all very well, and no doubt we all cherish the breath of life. But logical rigor is, after all, for our views of the nature of logic, a more important and more relevant consideration.

D. W. PRALL.

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LOGIC AS LANGUAGE HABITS VERSUS LOGIC AS FORMAL TRUTH

RESPECT for the achievements of symbolic logic in this century, for which I protest an admiration equal to Mr. Prall's,[1] does not always imply clarity as to what has been proved by it, even though one may feel certain that something important has been proved. In fact, to my mind, dangerous tendencies are afoot to claim that sym-

[1] Since it seems to me that no purpose would be served by an attempt to settle verbal disagreements when a fundamental difference of viewpoint is involved, I shall reply to Mr. Prall's article (this JOURNAL, pp. 113–119) in a broader, freer vein which will nevertheless, I hope, meet the main issue.

bolic logic has done many things that it has not done, tendencies which threaten to deny the primordiality and autonomy of logic. There is, for instance, the propensity to assume that, in the same way that modern mathematics has apparently revealed that there are many alternative geometries, all equally valid and none enjoying a privileged position or priority over the rest, similarly the development of symbolic logic has shown that there are many logics, all standing on an equal footing as internally self-consistent systems and all alike entirely arbitrary in their assumptions.

Such an analogy, however enlightening, seems to me to be misleading on two counts. In the first place, although there may be no foundational geometry presupposed by all other geometries, this is not the case as regards logic. That there is a "logic of logics" whose laws serve as common criteria and presuppositions of all disparate "logics" is a point hardly to be denied. Any formulation of the laws of logic (or for that matter of the rules of any theoretical system) is itself subject to the laws of this foundational logic, which has to be assumed valid before any significant statement of the particular laws of a particular calculus can be made.

In other words, the very possibility of there being a system and of its being tested as such on any terms requires its conformity to certain basic principles of *consistency* and *inference.* To build a system means, for one thing, to lay down certain *rules* or operations to cover certain *applications;* and whether their employment be described as similar to the mathematical relation of values to their variables or by the syllogistic relation of rule-case-result, in any event it involves those essentials of inference the "ground-consequent" and "law-instance" relations; that is, it embodies the notion of a union of law and instance by a "because-therefore" connection leading to a conclusion. Also any system-building worthy of the name [2] must possess *operational consistency* or integrity; that is, it

[2] The danger of placing a positivistic interpretation upon the operations of substitution and inference in logic is that their purely formal character will be forgotten, and that they will be taken simply as behavioristic manipulations expressive of trial and error or the replacement of one language symbol by another according to practical agreement. The mere fact that inference appears incapable of expression in the symbols of a logical calculus (*Principia,* 2d ed., p. 9) is no indication that it is an extra-logical act. On the contrary, inference as a formal process of complex relations should be listed among the postulates or principles in accordance with which conclusions are drawn of every logical system.

In so far as the passage from law to instance, from ground to conclusion, is regarded as controlled wholly by natural forces of human behavior (those listed by physiology, chemistry, and physics), such a process remains just what it is—a physical process, but not *proof.* Whenever, on the contrary, operations are really taken as proving anything, their movement or advance is recognized as due not to the pressure of natural conditions on the "prover," but as springing

must proceed in accordance with the rules laid down, and keep its promises in its performance. To this requirement of consistently sticking to its postulates, even the "logic" that made inconsistency its rule of operation would be no exception, since unless it remained consistent in its inconsistency, it would hardly retain enough unity to be called a system. Yet obviously this requirement of operational consistency, which seems to me the most basic kind, and which clearly involves the operation of the principles of identity, contradiction, and excluded middle, is not the same as the demand for the consistency of the matter of the postulates of a system with one another, with which the geometer appears concerned. The test for consistency used by geometers (which takes the form of exhibiting some concrete interpretation which fulfills all the postulates) rather takes such operational consistency for granted.

Now granting that no symbolism (Aristotelian, Boolian, Russellian) has ever been fully adequate to express the laws of this logic, and that perhaps none can ever be, nevertheless there seems that about the alternative "logics" that makes us know better what this foundational logic is like (somewhat as the imperfect whiteness of a page may help us to know what perfect whiteness is); and to me it seems plain that those logicians who stress necessary relations, formal validity, entailment, and the requirements of consistency and deduction mentioned above, are closer to that basic logic than those who emphasize accidental relations, nominal definitions, truth-values and implications (strict or material) of propositions taken as true to fact.

In the second place, the analogy of logic to geometry seems dangerous because, although it rightly calls attention to the act of free postulation at the basis of a theoretical system, it often does this by appearing to deny any control by principles other than those listed in the postulates, and by seeming to proclaim the entirely conventional and fortuitous character of logical systems in their basic aspects. Such a tendency, which finds expression in the attempt to reduce logic to a game of words, to a mechanical legerdemain with declaratory symbols, or to tautologies that "say nothing," is a misleading half-truth. For although the postulates of "logics," like those of geometries, are in part arbitrarily selected (and thus may differ widely from one another), the development of every system rests on the fulfillment of certain common requirements of consistency and inference, which the logician (or geometer) *is not free not to assume* so long as he adheres to any organized theory; yet

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from the relational pattern of the evidence itself, and as entirely sustained through the formal articulation of the structure. *Cf.* the writer's *Logic and Nature*, p. 110 f.

which are ordinarily only very partially or imperfectly stated in his avowed postulates. While this omission of logical postulates is no surprise in the case of a geometry, which is well understood to derive its propositions from a set of stipulations by granting and utilizing the methods of formal logic without explicit mention of them, it is very surprising in the case of a logical calculus, since its content is supposed to be precisely all the formal principles in accordance with which the reasoning is done. Accordingly, no little comment is occasioned when it is noted that the criteria and modes of procedure of a "logic" are not fully declared in its rules; while in a vain effort to escape this predicament a mistaken appeal is made by some logicians to pragmatic criteria or to factual correspondence, instead of to a more fundamental logic. The real situation seems to be that "logics" do not ordinarily (as might be expected) test themselves wholly on their own explicit terms, but tacitly appeal to more general principles in accord with which their deductions are drawn and which serve as their final test as systems.

By overlooking these canons of a non-alternative logic, which act as criteria of alternative systems *as systems,* certain recent writers are able to make a specious case for the contention that logic has nothing to do with truth. Thus Mr. Santayana entirely dissociating truth from mathematics and logic declares:

> Truth is not broached in pure dialectic, which is only the apprehension of a system of essences. . . . Logic and mathematics are not true inherently, however cogent or extensive. They are ideal constructions based on ideal axioms; and the question of truth or falsity does not arise in respect to them unless the dialectic is asserted to apply to the natural world.[3]

A position not very dissimilar, according to which the definition becomes the paradigm of logic and the *a priori,* truths being ultimately found and tested in an extra-formal world of practice, is developed by Mr. Lewis. In pursuance of the view that definitions (construed as essentially nominal) furnish the model for the constructions of logic, Mr. Lewis offers a theory of "strict implication" as the "proper" meaning of implication. "*P* strictly implies *q*" means for him that it is impossible (self-contradictory) that *p* should be true and *q* false. Thus "this is physical" strictly implies or necessitates that "this has mass" in the sense that "it is impossible that this should be physical, yet should not have mass."[4] At first sight this may look like a real extension of our knowledge, like a description involving insight and objective reference as to the structure of certain antecedently genuine, extra-organic objects. On

[3] *Scepticism and Animal Faith,* pp. 262–263.

[4] "It is an *a priori* principle that physical things must have mass." C. I. Lewis, *Mind and the World Order,* p. 26.

closer inspection, we are assured, however, such a statement turns out to be no more than an analytic, conventional tautology, a mere definition—whether partial or complete is not made clear—*nominal* in Mill's sense of being "a proposition declaratory of the meaning of a word," and not at all "essential" in Aristotle's sense of definition. What the implication amounts to is simply acquiescence in a convention which found it convenient to shape the first symbol so that in the language habits of a group it came to be invariably associated with, or to contain, the meaning of the other. And for the benefit of those to whom there may seem something a little satirical about this latest pronouncement that logical structure is a humanistic frame-up, the verbal habits of certain cliques within a narrow biological group, it is importantly announced that here we have "something not dictated by experience," something "necessarily true" in the sense that it is impossible of falsification. Possibly the tender-minded may be consoled to hear that "if experience were other than it is, the definition and its corresponding classification might be inconvenient, useless, or fantastic, but it could not be false.[5] Yet they should not overlook the fact that this is simply saying in a roundabout way that, since the post-Newtonian scientific world chose to define body as what has mass, and since definitions are merely verbal conveniences or agreements for the substitution of symbols, of course "nothing future experience can reveal will falsify"[6] them—or the explicates that follow from their assigned meanings—for the reason that they never said anything about the universe or the facts of nature anyway. Although we can not be sure, following Mr. Lewis, that all physical objects discovered in the future will have mass, we can none the less be certain that, if something is found without mass, it will not be *called* physical. For if imponderable objects should finally attain scientific status as recognized phenomena, science would simply allow the old definition of physical (together with other Newtonian conceptions that had grown inconvenient) to fall into disuse, replacing them by more useful verbal correlations.[7] Definitions then,

[5] *Op. cit.*, p. 240.

[6] *Ibid.*, p. 212.

[7] The justification of my previous interpretation of Mr. Lewis's view of logic on the analogy of the dictionary seems fairly indisputable. For definitions are what dictionaries are made of, and "the paradigm of the *a priori* is the definition" (*Ibid.*, p. 239). Moreover, both dictionaries and logics are in his opinion circular, analytic, and tautologous. In their recent *Symbolic Logic* (pp. 211–212) Lewis and Langford remark: "It is a very important fact that every law of logic has this 'tautological' character. The *source* of this necessary truth is in *definitions*, arbitrarily assigned. Thus the tautology of any law of logic is merely a special case of the general principle that what is true by definition can not conceivably be false. . . . The facts which the principles of logic state are simply facts of our meanings in the use of language."

for Mr. Lewis, are simply selected and replaced; there can be no question of their ever becoming false, since they are mere agreements of usage to assign meanings to words, and never say anything about the world.

One of the chief difficulties to be met in disposing of the *a priori* as verbal, conventional, and tautological, and in establishing the pragmatic criteria of truth, is of course to account for consistency and its tests. For the criteria of consistency (the so-called laws of thought, reaffirmation through denial, *reductio ad absurdum,* etc.) have been generally held to enjoy logical necessity in a sense other than that of mere conventional agreement in the use of symbols and, while depending on formal grounds alone, have been thought to furnish ultimate tests of truth. Faced with this problem, Mr. Lewis, though recognizing that logic is concerned with consistency and its tests, nevertheless takes the stand that these tests are "methodological"[8] only and have nothing to do with truth. Even the formal necessity which logic seems to enjoy has its source in definition, while for him the tautologies that are logical laws at bottom express apparently only voluntary agreement to *assert what we assert* and to abide by our chosen meanings in the use of language. Yet this simple conclusion is obscured from the reader of Mr. Lewis's logical

[8] *Mind and the World Order.* "Every good or correct logic will be such that its principles are undeniable without contradiction" (p. 208). "The test of self-criticism [reaffirmation through denial] or circularity is a valuable test . . . of logic. . . . It is not a test of truth, however; it is a test of . . . methodological consistency. The error of taking self-criticism to be a test of logical truth lies in overlooking the fact that a thoroughly false logic may still possess this merely methodological consistency" (p. 210). "The ultimate criteria of the laws of logic are pragmatic. . . . Genuine issues of logic are those which stand above such questions of the merely self-critical integrity of the logical system; . . . they can not be determined . . . except on pragmatic grounds of human bent and intellectual convenience" (pp. 247–248).

In an effort to show that the internal consistency of a system is no evidence of its truth, Mr. Lewis discusses here (pp. 207 f) the possibility of developing a "bad logic" by using "bad logical premises," but "good logical reasoning." As an instance, he suggests that we take the contradictory of the law of contradiction as a premise in the form "X is A and X is not A," and draw an inference from it. Now if we are really clever, according to Mr. Lewis, we will, consistently with the premise, refuse to take any step that reintroduces the law as a step in the reasoning; and hence we shall never get caught in an inconsistency. What he fails to notice sufficiently, however, is that in the original premise which denies the law of contradiction, we presuppose its validity (thus appealing to a more fundamental logic), i.e., that X means X and not non-X, that A means A where it occurs and not non-A, that "is" means "is," in short, that no term is both itself and not-itself at a given point. Hence this "badness" of the original premise, which consists in its inherent inconsistency with the principle in accord with which it is assumed, must infect the system with inconsistency and be precisely what makes it a "false" logic.

discussions by his continual use of the term "truth,"—as well as by the ambiguity of his employment of it to mean sometimes (1) agreement with a factual complex, sometimes (2) formal validity, or again (3) pragmatic convenience. Thus in his logic of strict implication, Mr. Lewis (despite his criticism of truth-value systems) constantly uses "true" and "false" along with the values of "self-consistency" and "necessity," seeming thereby to retain the conception of truth as meaning agreement with fact; e.g., "p strictly implies q" in the sense that it may be known from the import of p and q that it is impossible under any circumstances that p should be true and q false—to fact. Yet if logic as logic is only concerned with self-consistency, definitions, tautologies, it would seem to have nothing to do with truth as a value involving anything outside the symbolic system itself.

Now it seems to me that logicians are brought to a strange pass when they are asked to talk continually about truth, to assert implications between true propositions, yet at the same time to recognize that their formal systems as systems need have no connection with truth. For my part I hold that questions of pragmatic utility and agreement with fact are irrelevant to logic, since logic is essentially concerned (as is shown in the tests for consistency, etc.) with formal validity; which concern is in my eyes the same as preoccupation with truth. In behalf of the first part of my contention, that logic deals with validity, with the operational integrity of principles which are valid on logical grounds alone, I may quote from the "truth-value" system of Mr. Russell:

> It does not matter, for mathematical logic, what constitutes truth or falsehood; all that matters is that they divide propositions into two classes according to certain rules. . . . Further, we are concerned only with those combinations of propositions which are true in virtue of the rules, whether their constituent propositions are true or false.[9]

On such principles, it would seem perfectly possible to interpret a relationship between propositions as meaning: "If such and such is present, then such can not be absent," "If certain connections hold, then it is self-contradictory that they should not hold," or "If this is real, then that can not be unreal,"—without any reference to material truth. At any rate, such expressions make clear that the primary requisite for logic is faithful adherence to the rules the system has imposed upon itself, that is, operational consistency, and that the issue of the validity of the system turns upon structures and relationships which hold on formal grounds.

The real reason, for instance, why it is inconceivable that "x should be red, yet x should not be colored" is not that such a state-

[9] *Principia Mathematica*, Vol. I, 2d ed., pp. 660–661.

ment would violate the customary usage of settled language habits, but that such an application of relations would violate the basic logical laws of contradiction and excluded middle (upon which the definitions of implication, in terms of logical multiplication and addition, rest). According to these laws, x can not be both red and not-red, but must be either the one or the other; while applying a second principle of division to the same sphere of discourse, it is equally plain that x must be either colored or not-colored, and can not be both. Assuming that we can know the relations of these bases of division to one another, it is plain that "colored" is the genus covering both "red" and part of "non-red"; while its negative "not-colored" is restricted in its range to a mere species of "not-red." Thus to state that "x is both red and *not-colored* at the same time in the same respect" is to state that x is both red and not-red, since not-colored is a species of not-red, which is to deny the law of contradiction in weakened form. It may be noted here that, although the logical interpretation of classes, propositions, etc., may require knowledge of meanings in order to state their relations properly, this does not indicate any special dependence of the formal relations upon the particular meanings involved.

In the second place, my justification for calling certain formal relations true is not only that, if we understand them we assent to them, but that their validity is the precondition of all determination of correct statements of fact. Statements of every sort are subject to the laws of logic, whose trustworthiness is held to guarantee the significance of specific declarations about the natural world. Indeed, it is hard to see how truth can be claimed for the results of the sciences, if not through the aid afforded them by logical and mathematical laws, which enables them to achieve more exact, quantitative expression of the relations of phenomena. Yet many of these tests, be it observed, can never themselves be assessed by the facts and methods of physical science for the reason that science in attempting to test them already presupposes their validity.

The principles of consistency, inference, and probability not only negatively exclude the self-contradictory, thereby telling us what can not be real (such as invertebrate-vertebrates, lobsters that are crustaceans yet not arthropods, though crustaceans belong to that phylum, or the arrangement of three objects in nine combinations), but they may also help us to analyse and delimit the alternative possibilities of a field in advance of experience. Generally whenever there is a scientific prediction, there is a probability estimation, some implied reference to a totality of possible states of affairs relative to which the actual fund of experience is held to have a certain weight. Plainly this involves an appeal to grounds. For whenever in antici-

pating events, we assume that the field of future experience has been narrowed through a clue from the past (certain events being rendered more likely and others less so), we are really judging the future by comparison with a hypothetical totality by an inverse deductive process. Yet an appeal to grounds of probability really contradicts the assumption of the basically disconnected, incalculable nature of the world; its estimations only gain credibility on the supposition of the determinate constitution, constant relations, and relevancies of objects. Although the tendency of recent science seems to be to abandon the search for invariable sequences of phenomena as laws of nature, and to turn instead to the discovery of probabilities in the correlation of events, it is a mistake to construe this as the admission of indeterminacy into nature; rather, it would seem, it should be welcomed as the abandonment of the dogmatic positivistic view of the world, and the recognition of logical relations as more fundamental than natural laws.

In conclusion, may I add a more specific word in answer to my critic. First, the phrase "breath of life" in the context in which it appeared in my previous article was not meant to be biologically construed, but was rather used in a sense in which one might say, "To die to the naturalistic standpoint is the first breath of intellectual life." My intention was not in the least to question that "abstract forms are abstractions," in Mr. Prall's phrase, or to confuse the distinction between form and matter, but to maintain that logical laws are *formal processes* which enjoy a dynamic cogency of operation which might well be denominated logical force or necessity. Here Plato and Aristotle would, I think, bear me out. As for the reference to Mr. Eaton, the original passage of the article will show, I think, that the issue was not whether the act of deduction is characterized by certain psychological limitations, a point which I should not think of denying, but the very different issue as to whether deduction is nothing but a psycho-physical activity, and thus wholly determined by the fortuitous and factual character of our biological make-up.[10]

[10] Because of the difficulty I find in construing Mr. Wittgenstein's cryptic utterances, I hesitate to refer to him. Being a tautology is apparently necessary to being a logical truth on his view, and by a "zero-method" the propositions of logic attain truth because they "say nothing" (*Tractatus* *6.11). But why even these tautologies should be true, I can not understand. Needless to say, my objections are less with his proofs than with his presuppositions. Perhaps I may cite "more industrious logicians" in criticism of him. Mr. Langford (*Mind*, 1927, p. 342) says that "no proposition which is a tautology in the sense of Wittgenstein is a proposition certifiable on logical grounds alone,"—and therefore none would to my mind be genuine logical laws. Mr. Weiss, who quotes Mr. Langford's statement in his *Nature of Systems* (p. 33) adds that "The whole Wittgensteinian movement . . . is based on the attempt to derive *a priori* truths from matters of fact, and is best met by a little dose of Kant." To Mr. Weiss's work I am indebted at several points.

The tendency to divorce truth from formal systems by reducing logical necessity to tautology and intimating that it is only a special case of definition leads inevitably to verification by extra-formal knowledge, that is, either to a theory of tallying logical relations with factual complexes or to testing meanings by their utility in practice. Yet if, as we have maintained, logic is fundamentally true and is the science of the formal tests of truth, these attempts to interpret truth in terms of some correlation between systems and extraneous states of affairs must be rejected. Whether a Euclidean or a non-Euclidean geometry fits the facts of the physical world better according to the scale of the engineer or the astronomer may be a question of utility or of correspondence, but has nothing to do, as I see it, with the issue of the truth of the particular geometries.

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BOOK REVIEWS

Hume's Philosophy of Human Nature. JOHN LAIRD. New York: E. P. Dutton and Company. 1932. Pp. ix + 312.

Professor Laird has produced a much-needed book in this careful, thorough, competent study of the philosophical work of David Hume. He has not abused Hume, as did T. H. Green, by turning him into a foil for the exploitation of his own system; nor has he distorted Hume, as did T. H. Huxley, by picturing him as a partial and preliminary expression of his own later philosophy. Professor Laird has been both an ardent admirer and a constant student of Hume. "If I remember correctly," he writes (p. v), "there have been only four years out of the past twenty in which I did not lecture regularly upon Hume." But he has portrayed his subject with a justice that does not gloss over serious faults and with an appreciation that never turns historical analysis into partisan propaganda. His book at once becomes the most important single treatment of Hume's philosophy. It is both a book to read from cover to cover in sustained attention and a reference work to turn to on many detailed points of controversy.

Professor Laird follows in general the order of subjects that Hume adopted for the *Treatise*. After a largely biographical introduction come chapters on Hume's phenomenalism, space and time, causality, bodies and minds, scepticism, the passions, and ethics. Then the material of Hume's essays and history is used to fill in the outline Hume gave (in the introduction to the *Treatise*), but did not himself systematically develop, of the sciences that he considered de-

pendent upon the science of human nature. And a final chapter deals with the religious problems which were constantly before Hume's attention, received notice in many of his works, and found their most complete treatment in the posthumous *Dialogues.*

Throughout the book Professor Laird gives ample space to a discussion of Hume's sources, and enables his readers to gain a vivid picture of the relation between Hume's reading and Hume's writing. The sources fall roughly into three groups,—(1) the ancient classics, Cicero preëminently, but also Lucretius, Longinus, Virgil, and Terence; (2) recent French authors, here Bayle preëminently, through whom came much of Hume's knowledge of minor Greek and Roman writers, also Montaigne, Malebranche, the *Port Royal Logic,* Voltaire; and (3) English writers, Locke and Berkeley of course, as frequent mention in Hume's writings suffices to show, and Shaftesbury, Hutcheson, and Butler, William Law, Mandeville, Samuel Clarke, Dodwell, Anthony Collins, etc. One can fairly see Hume's mind at work, influenced and attracted and repelled by these and other intellectual and literary forces of his eighteenth-century world.

In commenting on his repeated study and teaching of Hume, Professor Laird writes: "Every year that I return to him, I find that I have misunderstood him on some points, and neglected the subtlety of his views on many." This is not, in all probability, an unusual experience for even the closest and most persistent readers of the *Treatise.* The reason is not far to seek: it is the presence in Hume's writings (sometimes in crucial passages) of equivocal terms and phrases. Often alternative meanings for one equivocal term or phrase will involve big differences in the interpretation of other doubtful passages. And so any critic will always find it difficult to reach a well-rounded estimate of Hume's total significance or even a final analysis of any of his more involved theories, such as his theory of the nature of causation. Professor Laird notes many of Hume's equivocations, and he often gives a telling account of their origin in and pertinence to the currents of eighteenth-century controversy. One suspects that he has considered and already rejected many a criticism that might be brought against his book. But it is tempting to press some such points, even if they amount to no more than the occasion for some further discussion that Professor Laird may later make upon Hume.

Hume's treatment of causation is, in Professor Laird's as in other earlier critics' opinion, "his greatest contribution to theoretical philosophy" (p. 84). And Professor Laird's chapter on that contribution is one of the most penetrating sections of his book. It seems to me both to excel any other analysis I have seen of Hume's theories of causation and to fail to note certain elements in those

theories. One respect in which it excels is in making quite clear that the idea of causation was not for Hume merely an unfounded idea or fiction. This idea, like any other idea, may be and often is abused; but it also, again like any other idea, goes back to and is derived from an antecedent impression. So far from teaching that the idea was utterly groundless (as many readers of Hume have taken him to assert), Hume pursued through to a successful conclusion his hunt for the impression from which the idea comes. And he found this impression (as Professor Laird shows) in the "original" feeling of necessitation in our own minds. This feeling is a genuine and empirically discoverable fact, even if it is an "impression of reflection," instead of being, as has usually been supposed by Hume's predecessors, a primary datum of sense (*cf.* chapter IV, *passim,* but especially p. 128). Thus we have, according to Hume's explicit teaching, an impression of causation every time we experience the feeling of necessitation in our minds. We may not have an impression of causation or necessary connection among the impressions conveyed to us by the senses, but we do experience causation directly in an impression of reflection, the occasion of which in us Hume takes the trouble to expound at length. The idea of causation is often applied too facilely and too carelessly to situations where experience does not warrant us to apply it. Yet in Hume's very meticulous empirical critique of the idea we are shown its solid basis in our own experience.

So far I follow Professor Laird eagerly. But now I begin to want to press a further point which he fails to make and with which certain expressions show him to be in disagreement. For example I puzzle over the statement with which he introduces his discussion of Hume's rules by which to judge of causes and effects. He writes: "Hume prefaced his account of these 'Rules by which to judge of causes and effects' by the curious remark that because '*a priori* any thing may cause any thing' 'it may be proper to fix some general rules by which we may know when causes really are so' " (p. 139). Why does Professor Laird regard this remark as a *curious* one for Hume to make? Because—if I read him correctly—he takes Hume to mean that no objects are causally connected until uniformity of experience produces in us a certain habit or expectation and thus gives rise to a feeling of necessitation in our minds. Indeed he explicitly asserts that Hume was guilty of a fallacy in saying that "the repetition *produced* the new feeling of determination" instead of merely being associated with it in an inexplicable way (p. 130). Now there are some passages in Hume, which, considered apart from the context of polemical reference which runs throughout the whole first book of the *Treatise,* are usually so read as to substantiate this

interpretation. But they often ought not to be so read, and there are others which can not possibly be so read at all. Hume's assertions, like those of many another philosophical writer, must be understood in the light of what current supposition is thereby denied. What Hume was constantly alert to deny we shall consider presently. But we should first of all realize that no inconsistency is involved in asserting both that a certain impression of reflection is the only source of our idea of necessary connection, and that there is a causal order independent of and antecedent to our minds. Hume, as Professor Laird shows, held the former of these views. He also, as I would contend, held the latter too. I grant that in extreme passages Hume seems to dissolve all beliefs into the uncertainty of utter scepticism. Ordinarily, however, Hume implied and at times he explicity asserted a causal order that we discover and do not invent. And if this be so, not simply does Hume commit no fallacy in saying that "the repetition *produced* the new feeling of determination," but also he is well advised (since the *impressions* of necessitation are, in his opinion, only "in our own minds") to draw up rules to safeguard our application of the *idea* of causes and effects to other sequences of nature. Not by observing causal connections between objects about us (for Hume, whether rightly or wrongly, denied the possibility of such observation), but by applying to the examination of the sequences of objects certain rules based on a study of the conditions under which feelings of necessitation arise "in our own minds," —only so do we ever know, in Hume's own words, when supposed causes and effects "really" are so.

What Hume was constantly alert to deny is seen in such a passage as the following. "According to the precedent doctrine, there are no objects, which by the mere survey, without consulting experience, we can determine to be the causes of any other" (Selby-Bigge edition of the *Treatise,* p. 173). The important phrase for the present discussion is *by the mere survey, without consulting experience.* Hume is obviously combatting the Cartesian tradition. Professor Laird recognizes that Hume stands in the Newtonian tradition and that his work may be considered as the carrying out of Newtonian principles in "moral subjects" (p. 20). But in Hume's day to be a Newtonian was on many points to be an opponent of Cartesianism.[1] Cartesianism meant (in England at least, whether

[1] Professor Laird says in one passage (p. 153) that Hume speaks "in the usual Cartesian-Newtonian vein." This remark is true; for he is considering Hume's comments on the "ancients." But Cartesianism and Newtonianism were at swords' points on many issues. And though this conflict was echoing all through the decade when Hume was writing, Professor Laird does not seem to take it into account.

or not Descartes himself was fairly interpreted at this point) that we can anticipate, supplement, or go beyond experience by means of "clear and distinct ideas." Newtonianism meant the rejection of such "rationalism" (*cf.* Newton's celebrated remark "Non fingo hypotheses") and the acceptance of the experimental method as the sole source of genuine knowledge. Hume expressed a clear Newtonianism in the *Enquiry* in the oft-quoted closing passage about "abstract" or *a priori* knowledge of "relations of ideas" and "experimental" knowledge of "matters of fact"; and he used, as Professor Laird points out, much the same language in the *Treatise* (p. 52).

The significance of the underlying current of polemic in Hume's writing is more apparent if his position is compared with that of some of his predecessors. We need not here go back to the Cambridge Platonists who were more Cartesian than any other group in England. We need merely to recur to John Locke. While rejecting innate ideas and *a priori* knowledge of matters of fact, he yet remained in some ways strongly under Descartes's influence. Important for our present discussion is his retention of the rationalistic ideal of knowledge even where he most explicitly pronounced the realization of that ideal utterly impossible. He wrote in the *Essay* (Book IV, chapter III, section 25): "I doubt not but if we could discover the figure, size, texture, and motion of the minute, constituent parts of any two bodies, we should know without trial several of their operations one upon another; as we do now the properties of a square or a triangle." *Without trial!* This is sheer Cartesianism, even if mitigated by scepticism as to its practical value. And if Locke retained so much of Cartesian influence, Hume's anti-Cartesian polemic could hardly have been pointless a half century later in a country where Locke for a time was almost authoritative. Neglecting other teachings of Locke and confining our judgment to this point, we may fairly say that Locke was a disciplined Cartesian or a reluctant Newtonian. He was a disciplined Cartesian because he was not carried away by his wishes and never wearied of proclaiming that the rationalistic ideal was quite unattainable in the case of substances or "real existence." But he was a reluctant Newtonian, because he continued to crave a kind of *a priori* knowledge that Cartesianism claimed to offer. Hume on the other hand was an eager and militant Newtonian; and though a close student of Locke's *Essay,* he was keenly aware of the full implications of accepting the "experimental method." His Newtonianism was, so to speak, self-conscious.[2] He fought Cartesianism both because he thought it untrue, and because he saw how, under its cover, men were led to

[2] It is tempting to say that Hume was more Newtonian than Newton; for in the *Dialogues* he disclosed the implications of the "experimental method" for a subject-matter to which piety restrained Newton from applying it.

attribute their own subjective biases to the independent "operations of nature." Rationalism is a bad philosophy, he maintained, not merely because (as Locke had been led to grant) our ideas are not reliable guides to a knowledge of what lies beyond experience, but also and more importantly because *relations* between *facts* are not akin to *connections* between *ideas.*

With this reminder of the controversial background and polemical character of Hume's treatment of causation I return to my difference with Professor Laird. That difference, so far as I can make out, is due to, or at least is reflected in, a difference of interpretation of some of Hume's equivocal phrases. Take for example the statement that "*a priori* any thing may cause any thing," a statement which Professor Laird finds a "curious" premise for concluding that we need rules by which to know when causes really are so. This phrase occurs substantially on page 173 of the *Treatise* (Selby-Bigge edition), but exactly so on page 247, where it stands in a context that is worth quoting. "Now as all objects, which are not contrary, are susceptible to a constant conjunction, and as no real objects are contrary; I have inferred from these principles, that to consider the matter *a priori,* any thing may produce any thing, and that we shall never discover a reason, why any object may or may not be the cause of any other." No real object, i.e., no existent object, is contrary to another, because contrariness is a matter of logical opposition and is found only between ideas. So far as *a priori* considerations go, that is, so far as *logic* goes, any object may be causally related to any other; a cause does not *imply* its effect. Hence we can never give reasons why a cause produces the effect it does produce and does not produce some effect it does not produce, just as (to generalize our statement) we can never give reasons why things are as they are and are not as they are not. We can never give reasons in such matters, because actual existences and actual relations between existences are not like ideas and connections between ideas. Existence is, as we sometimes say, a "brute" fact; it is something to accept on empirical evidence, rather than something to be logically accounted for. Or, to put Hume into terms of his own eighteenth-century controversy, Newton is right and Descartes is wrong.

We should notice that in this passage Hume does *not* say that certain objects are not "really" causes; he does *not* assert "so absurd a proposition as *that anything might arise without a cause*" (quoted by Laird, p. 96, from a letter in Burton's *Life of Hume*); he does *not* say that no objects are causes until we so regard them or associate them with what we are accustomed to regard as their effects. The passage is wholly consistent with belief in a causal order "independent of and antecedent to the operations of the understanding."

It is wholly consistent with an attempt "to fix some general rules by which we may know when causes really are so." In other words the causal relation is one of the philosophical relations "such as may be changed without any change in the ideas" instead of being "such as depend entirely on the ideas" (to quote from the opening page of Hume's long treatment of causation in Part III of Book I of the *Treatise*).

Or take Hume's statements that all events are "loose and separate," that "objects have no discoverable connection together," and that we should not suppose "any real intelligible connection" between objects. Events are *not* loose and separate in any sense opposed to a recognition that "the operations of external bodies are necessary"; they are loose and separate relatively to logical or rational considerations. There is no "intelligible" connection, because intelligibility is "a quality which can only belong to the mind." And Hume can even say, consistently with a belief in an objective causal order, that "objects have no discoverable connection together," because he is using the term "connection" in a highly technical sense. A connection is a bond which enables us to draw an inference from one object to the other in advance of experience (*cf. Treatise,* p. 103); it is not any and every relationship. Indeed Hume takes precaution (usually, not always; for his writing was inexact) to contrast *connections* and *relations.* For instance he writes (p. 166): "The simple view of any two objects or actions, however related, can never give us any idea of power, or of a connection betwixt them." He here explicitly asserts that objects may be *related* without giving any evidence of being *connected.* To put the point in words relevant to the present discussion, the discovery that one object or action is cause of another can never enable us to view that relationship as an instance of logical implication such as we find at times between one idea and another.

Apart from such internal evidence for the above interpretation of Hume's language as is given by a reading of the *Treatise,* we may find further corroboration in parallel usage in writings with which Hume is known to have been familiar. Hume is not capricious (though he is careless) in his language; and if at times (as in his usage of the term "idea") he departs from contemporary linguistic practice, he tells his readers so. In using *relation* and *connection* in a technical way for contrasted meanings, he is only following the example of Locke whose *Essay* was well known to all readers of philosophical literature in his day. Locke's *Essay* contains passages such as the following: "There is no conceivable connection" between the primary qualities of things and the ideas of their secondary quali-

ties in our minds (Book IV, chapter III, section 13); we must reconcile ourselves to an irredeemable ignorance of the "necessary connection" of the qualities and powers of bodies with one another (*ibid.*, section 16); we must acknowledge that we can find no "necessary connection" between even one moment and another moment in the existence of a man (Book IV, chapter II, section 9). Now Locke surely will not be interpreted as denying that we discover and know causal relationships in nature, even though he denies our ability to discover and know necessary connections. Why then should Hume not be taken to be using terms in the same way, especially in the light of the pertinence of his discussion both to Locke's position and to the vestiges of Cartesianism which still lingered in his day?

Professor Laird speaks of Hume's reiteration that all events are loose and separate as "his official theory" and asserts that it is incompatible with Hume's recognition of a "systematic interconnection in nature" (p. 131). Both parts of this statement are sound; but they are not sound, I believe, in the sense in which Professor Laird takes them. To say that all events in nature are loose and separate is not to say that no fixed and uniform relations exist until habits and associations arise "in our own minds"; rather it is a Humian way of saying that natural relationships are not necessary connections such as Cartesianism took them to be. And the remark *is* incompatible with any recognition of interconnections in nature, but not with belief in a causal order "independent of and antecedent to the operations of the understanding."[3] In the light of this interpretation of Hume I see no reason for not ascribing to Hume pretty much (not exactly, because Hume denied the experience of "agency") the "tenable theory" of causation that Professor Laird outlines (next to last paragraph, p. 103) but supposes would be "nonsense" to Hume!

I have extended my discussion of certain elements in Hume's theories of causation to a great length. I may seem thereby to be attacking Professor Laird's treatment of those theories more than I mean to do. I repeat that I find his treatment the best I have ever seen. And even on points where I attack his interpretation I must

[3] In the opening pages of Book III of the *Treatise* Hume asserts emphatically that he believes in uniform and necessary interconnections in nature. Perhaps Professor Laird is thinking of these pages. But as far as I can see, these pages enforce my criticism of Professor Laird. Hume is obviously inconsistent somewhere. But the inconsistency is, I think, one of language only. When Hume asserts belief in interconnections and necessity in nature in Book III of the *Treatise* he is no longer dealing with issues such as he dealt with in Book I, Part III; rather he is attacking what he considers the false supposition that men's passions and ideas are a realm of chance where causation does not prevail. Thus, while Hume's language is amazingly careless here, he is only re-expressing what I take to be his position on causation in Book I, Part III.

now add that Hume occasionally justifies him. Though the burden of Hume's discussion (and especially in the definitive sections of Part III of Book I of the *Treatise*) is in my opinion what I have insisted on above, there are other passages of different tenor. Hume writes at times in terms of a subjectivism akin to Locke's and in terms of a sensationalistic atomism. Then all impressions and ideas are loose and separate in the sense that they contain in themselves no structure; most relations are set up as the result of mental associations; and causation therefore occurs in ourselves only and not in objects apart from us. (It was this strain in Hume that drew forth T. H. Green's reply.) Professor Laird holds that in these passages Hume is guilty of "an unconscious betrayal of pure phenomenalism" such as he normally or "officially" maintains (p. 27). I think that I would regard Hume's betrayal of phenomenalism as more frequent and more insidious than does Professor Laird. But I need not argue that point here; for I do not find such betrayals at all conspicuous in Part III of Book I of the *Treatise* where Hume's definitive discussion of causation is of course to be found. Hence the passages which sustain Professor Laird in accusing Hume of "fallacy" or "inconsistency" in asserting belief in a causal order independent of and antecedent to the operations of the understanding are not passages in which Hume expresses his "official" position.

I should add in closing that Professor Laird gives admirable analyses of Hume's treatment of the ancient and the modern philosophy (pp. 151–156), of Hume's ethics (chapter VIII), and of Hume's historical writings (pp. 261–273). And his closing chapter gives so completely and so fairly all the evidence in regard to Hume's beliefs on religious subjects, that it is hard to see how any one could improve on it.

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Sociologie. Partie de Philosophie. ERNEST ROGUIN. Lausanne: Charles Peche. 1928–1929. 3 vols. Pp. 658; 749; 766.

The author of these three gigantic tomes is an Emeritus Professor of Law at the University of Lausanne. He is also an honorary member of the Institut de Droit International. He has contributed some important volumes to the science of Jurisprudence, notably, *La Science Juridique Pure,* in 3 volumes. For one reason or another, however, he has decided to devote the remainder of his life to an elaboration of a system of sociology, but he has found it necessary first to preface his Sociology proper with five volumes on Philosophy (we are here reviewing the first three volumes). Like Voltaire's *Ingénu,* Monsieur Roguin is of a very independent turn of mind.

Frankly to express everything we think, constitutes one of the consolations of our old age. Happily, nothing forces us to refrain from indulging in this satisfaction. No longer a professor, a bachelor, outside all academies, we are free from the necessity of taking into account other people's opinions and sentiments, and nothing kept us from attacking the great idol of the period (Bergson), whom we nevertheless greatly respect. Of course our frankness is not without its inconveniences; we can not expect, for our person, prizes and distinctions; nor for our books, the added publicity which results from the favor of Academies and important people who speak in their name. What is more, we have brought upon ourselves the animosity and silence of a kind of clique of Jews and Protestants who seem to have a foothold everywhere. Let us console ourself in our intellectual isolation, broken, now and then, by rare friends and faithful partisans. [*Avant-propos*, p. vii, Vol. III.]

It seems to the present reviewer that there are certain weaknesses in an intellectual production of something like two thousand closely printed pages, when they are filled with information taken from secondary sources, like Robin's *History of Greek Philosophy;* Fouillée's *History of Modern Philosophy;* Ruggiero's *History of Contemporary Philosophy.* No serious scholar, whatever the accident of his race, religion, or bank-account, can very well become enthusiastic over the output. Furthermore, as the author himself tells us, "it will suffice to glance through our work in order to recognize that it resembles no other on the same subject. . . . Without ourself expressing a personal opinion, we have maintained that only two metaphysical systems, *materialism* and *religious spiritualism* remained standing after the combat [of analyzing them]; but that neither one of these was capable of overcoming its opponent" (p. v, Vol. III). In other words, Monsieur Roguin plays the part of an objective interpreter. Unfortunately, the exposition is very rambling and interspersed too often with personal polemics.

The present reviewer would certainly be inclined to look with unqualified sympathy upon a work which attempted to deal with philosophy as a sociological phenomenon, as an aspect of culture. This is what the present volumes purport to do. Unfortunately, however, the promise is not at all fulfilled. Perhaps in forthcoming volumes the unity of the entire system will become more apparent.

MOSES J. ARONSON.

COLLEGE OF THE CITY OF NEW YORK.

A Philosophy of Reality. E. L. YOUNG. Manchester: Manchester University Press. 1930. Pp. ix + 266.

According to the writer "The Business of Philosophy is to explain the Universe," and this phrase is interpreted in the classical sense of superposing a cosmic scheme of relations upon the material structures of the various sciences and pursuits devised by man as partial explanations. Thus from the outset the book is doomed to a

type of broad, breathless generality. The methodological dangers inherent in any such extremely generalized approach are clearly displayed in much of the subsequent chapters, especially those in which the domains of the special sciences are invaded. In the chapter on time, for instance, the proverbial distinction between subjective and objective time is made and clung to without any apparent recognition of the searching analysis into the physical meaning of time that has recently been made, e.g., of the type of Lindemann's *Physical Significance of the Quantum Theory*. The most successful portion of *A Philosophy of Reality* is the last, "Essential Values," though here again the work is vitiated by an attempt to discuss the classical verities in terms of cytology and "electrons."

RUDOLF KAGEY.

WASHINGTON SQUARE COLLEGE,
NEW YORK UNIVERSITY.

The Approach to Philosophy. J. F. WOLFENDEN. London: Edward Arnold. 1932. Pp. 236.

Composed originally as an attempt to minimize "the difficulties and problems which trouble beginners in those Final Honour Schools wherein the study of philosophy is included," *The Approach to Philosophy* presents a careful analysis of many of the recurrent problems of philosophy in their classical contexts. Philosophy is considered in the traditional bifurcate way as "critical" and "constructive." The "single unhypothetical fact" which warrants philosophy's position "as critic of science" is to be found in "consciousness, our awareness of mind, or the subject-object relation" (p. 231). And on this basis a metaphysic similar (even in nomenclature) to that of *Appearance and Reality* is erected. The easy discursive style and leisurely progress of the volume recommend it as an introductory text.

RUDOLF KAGEY.

WASHINGTON SQUARE COLLEGE,
NEW YORK UNIVERSITY.

The Rôle of Logical Form in Propositions about Existence. STANLEY B. REID. Berkeley: University of California Press. 1931. Pp. 75.

The thesis presented is proposed partially as follows: "The proposition has its characteristic composition resolvable into a substantive and the adjective. The significance of these categories is exhausted in the unity which they compose, namely, the proposition. And they are not separated as two terms in relation are ordinarily separable or distinct, but, which is very different, they are merely distinguishable as the converse aspects of the connection called by Johnson, the characterizing tie. . . ." The position thus briefly

stated is amplified and defended by a critical examination of the logics of Johnson and Bradley.

RUDOLF KAGEY.

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JOURNALS AND NEW BOOKS

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NOTES AND NEWS

The program of the lectures for 1933 of the Philosophical Union of the University of California on the general subject of "Possibility" is as follows:

January 20. What Makes Possibility Possible? ..... *G. P. Adams*
February 3. Possibility and Identity ..... *Ralph Church*
February 17. The Ontological Status of Possibility .. *V. F. Lenzen*
March 3. Possibility and Context ..... *J. Loewenberg*
March 17. The Possible and the Actual ..... *E. W. Strong*
April 7. The Realms of Possibility ..... *D. S. Mackay*
April 14. Possibility and Significance ..... *Paul Marhenke*
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Volume XXIX. No. 26. December 22, 1932.

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